

ANNUAL BOTANY REPORT FISCAL YEAR 1997

Prineville District Bureau of Land Management

I. STAFFING

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II. MAJOR ACCOMPLISHMENTS

A. INVENTORY/NEW POPULATIONS FOUND

Some limited inventory was accomplished for *Astragalus peckii*, *Astragalus tyghensis*, *Botrychium pumicola*, *Calochortus longebarbatus* var. *peckii*, *Castilleja chlorotica* and *Lomatium farinosum* var. *hambleniae*. Inventory mainly resulted in expansion of boundaries of known populations, except for the *Calochortus* and the *Lomatium*. *Calochortus longebarbatus* v. *peckii* was discovered (as suspected) in the Lookout Pasture, lands acquired as part of the Cline Falls land exchange. *Lomatium farinosum* v. *hambleniae* was discovered on public lands in the Criterion Acquisition and subsequent inventory shows that it is throughout the area in suitable habitat.

New populations of both *Carex hystericina* and *Juncus torreyi* were found in the course of project clearance work for spring developments. Both species appear to tolerate a great deal of livestock use.

B. MONITORING

Some form of monitoring occurred on 47 populations (12 species) of Special Status plants, including: *Astragalus diaphanus* var. *diurnus*, *A. peckii*, *A. tyghensis*, *Botrychium pumicola*, *Calochortus longebarbatus* v. *peckii*, *Carex hystericina*, *Castilleja chlorotica*, *Juncus torreyi*, *Lomatium ochocense*, *L. suksdorfii*, *Mimulus jungermannioides*, and *Thelypodium eucosmum*.

Astragalus diaphanus var. *diurnus* appeared to be

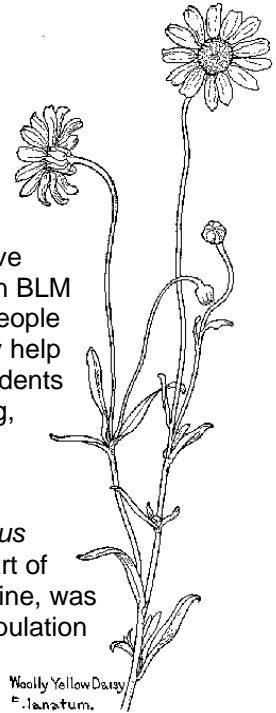
secure. Plants were not as numerous as in previous years.

Astragalus peckii is generally secure. It appears that increasing development and subdivision on adjacent and intermingled private lands may have a positive effect, in some cases, on BLM lands. The increase in people living by BLM lands may help to deter some of the incidents of illegal firewood cutting, OHV damage and other undesirable activities.

A population of *Astragalus peckii* in the southern part of the district, south of LaPine, was mapped. Most of the population is on adjacent Forest Service land. This population is centered under a powerline and the vegetation is cleared of lodgepole pine on a regular basis. Our guess is that the plants became established through equipment usage and are now spreading along the roads in this area.

Astragalus tyghensis seems to be doing well in most situations. One population is being overrun by diffuse knapweed (*Centaurea diffusa*) which exists in profusion on the surrounding private lands. Gail and our district weed specialist handpulled the knapweed from the population. The county weedmaster was also there and will begin spraying away from the population, now that he knows what to protect. We will see which plant wins.

Botrychium pumicola (in the LaPine basin) again seems to have had a poor year, with low numbers



recorded. Ron spent a day with the Forest Service at a "Botrychium Summit" to try and get a management agreement worked up. One of their major concerns has to do with their land exchange program and its impact on BOPU.

Carex hystericina is doing well. It appears to tolerate a fair amount of livestock use.

Castilleja chlorotica definitely does not like fire. A population monitored last year after an accidental burn had rebounded nicely. Gail, in fact, marked each plant in the burned area with flagging. This year, there were no plants by any of the flags (except for one depauperate specimen) while the unburned areas exhibited mammoth-sized *Castilleja chlorotica*. Again, inventorying for the species on West Butte, where there was an old burn, plants were consistently found in the unburned islands but not found in the burn.



Little Yellow Monkey-flower-
Mimulus primuloides.

Juncus torreyi, increasingly found at springs and seeps, appears to be able to tolerate significant livestock use, probably due to its suspected unpalatability and its massive root system. It was found in some of the worst country (ecologically-speaking) we have and known populations appear to be flourishing. Our concern is that as we fence springs, what will this do to the species?

Lomatium ochocense, a recently described (but not yet published?) bisquitroot from the Ochoco Mountains, was monitored jointly with the Ochoco National Forest. The plant occurs mainly on BLM lands but was originally found on the Forest and described by the Ranger District botanist, Rich Helliwell. TNC, through a Forest Service challenge-cost-share, set up long-term monitoring last year. The populations seem to be secure, numbering in at least half a million individuals. A Forest Service-funded genetics study was also initiated on this species this year.

Our one known population of *Lomatium suksdorfii*, near The Dalles (an excuse to see the northern part of the district) is doing as well as can be expected. Prior visits indicated less than 100 plants. This year, the population was expanded to more than 500, mostly due to our ability to recognize the many small, non-flowering

individuals in the area. This reproductive status may be a result of the heavy livestock grazing in this predominantly-private land area.

One *Mimulus jungermannioides* population in the extreme NE portion of the district was relocated and found to be many times the original size due to adjacent habitat not previously seen. Ron got better than two dozen ticks on him this day.

Populations of *Thelypodium eucosmum* seem to be secure although numbers seemed to be down.

C. CLEARANCES

A total of 29 projects were inventoried and reports written for the presence/absence of special status plants, encompassing about 5,000 acres. Many of these were small spring developments, land exchange parcels, etc. Few new populations of special status plants were found and little to no modification of the projects were required.

III. OTHER ACCOMPLISHMENTS

A. NATURAL AREA MANAGEMENT

The management plan amendment was completed for The Island ACEC/RNA, which also included a prescribed natural fire plan that generated quite a bit of concern with Oregon State Parks. The ACEC/RNA is within State Park boundaries. Visitor use will also be curtailed with a free-use permit available only for educational and research purposes. Recreational use will be diverted to a newly-constructed trail on adjacent Forest Service (Crooked River National Grassland) property, giving a better hike and better views with less impact. This trail was inventoried by BLM, NEPA'd by the Forest Service and built by Oregon State Parks with volunteers. Truly an interagency effort! The Island ACEC/RNA is proving to generate an increasing workload. Another cooperative effort between BLM and the Native Plant Society of Oregon resulted in the pulling of thousands of medusahead (*Taeniatherum caput-medusae*) plants in early June.

Additional species list work was done in both Forest Creeks and Powell Butte ACEC/RNAs. Defensibility monitoring (fence repair) was accomplished in the Horse Ridge ACEC/RNA.

Couldn't believe it, but a couple of mountain bikes made a pass through the area.

B. CHALLENGE COST SHARE/COOPERATIVE EFFORTS

Two challenge cost share projects were funded: The seventh year of a long-term study of *Astragalus tyghensis* (ODA) and a juniper establishment study (Horse Ridge and The Island ACEC/RNA) with Knapp and Soule (Georgia State and Appalachian State universities, respectively). Results are pending.

Specimens of *Orobancha corymbosa* were collected and shipped on dry ice to a researcher at Vanderbilt University who is doing a genetics/photosynthesis research project. If laboratory analysis pans out, she may come to the district next year to do some *in vivo* measurements.

Several days (with supervisor concurrence) were dedicated toward Oregon Plant Atlas Project species list compilation and associated field work. Gail participated in two joint field trips with the Deschutes NF and NPSO to gather species information at two different sites in the Central Oregon area.

Ron assisted OSO and TNC in the balloon photography project of Lawrence Memorial Grassland (near Shaniko).

Ron also assisted in a field presentation at the "Tumalo Natural Area", a pseudo-natural area which is part of the larger Peck's Milkvetch ACEC, near Sisters. This was part of a pre-Natural Areas Conference tour.

Ron and Gail both spent a day with Deschutes NF staff, collecting seed from *Castilleja chlorotica*, in the Pine Mtn. area. This was a small part of a challenge-cost-share project initiated when FAA wanted to construct a tower in *Castilleja chlorotica* habitat. Proposed mitigation involved the Berry Botanic Garden in trying to propagate and re-establish plants elsewhere. These seeds will be used for possible re-establishment or simply stored at BBG.

Gail spent a day with Forest Service botanists in the LaPine/Crescent area discussing the effects of the Crown Pacific land exchange on *Botrychium pumicola* and *Astragalus peckii*.

C. OTHER PROGRAM SUPPORT

Botanical input was provided for several grazing allotment evaluations/plans. A fence in one allotment was identified for reconstruction/modification to provide acceptable management for *Castilleja chlorotica*.

Plants of cultural value continue to be collected in support of the Cultural Resources program. The goal is to have a "mini-herbarium" of cultural plant materials the specialists can use to train their technicians and also to use for school presentations.

Continual assistance is given to district field personnel in matters of plant identification.

D. ATTENDANCE AT TRAINING/CONFERENCES

Ron attended a week-long GPS course and the Rare Plant Conference in Bend.

E. OTHER ITEMS OF INTEREST

Of note is the fact that Gail is in love. With Ralph. Ralph being the botany program's PLGR GPS unit. This piece of equipment proves to be extremely valuable in relocation of any feature on the ground for which there are established coordinates. She has used it to record population locations, for navigation where landmarks are not readily apparent and to relocate the truck! It's definitely a keeper. Call her for more information.

